DOCUMENT RESUME

ED 089 655 IR 000 350

AUTHOR Weisman, Herman M.
TITLE The Importance of Information Analysis Centers in the Performance of Information Services.
PUB DATE 73
NOTE 9p.

EDRS PRICE MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS Definitions; *Information Centers; Information Dissemination; Information Networks; Information Processing; *Information Services; Information Utilization

ABSTRACT

It is necessary to distinguish the functions, services and products of various types of information services. For example, document centers, clearinghouses, referral centers, and special libraries deal mainly with information in a broad sense. The main function of information analysis centers, however, is to optimize the ratio of knowledge to information generated. The key activities involve the analysis, interpretation, syntheses, evaluation, and repackaging of information. These functions and services are performed by high level professional personnel and subject experts. Because of this capability to distill reliable knowledge from information, information analysis centers can play a critical role in making better use of information already generated. (CH)

ED 089655

BEST COPY AVAILABLE

THE IMPORTANCE OF INFORMATION ANALYSIS CENTERS IN THE PERFORMANCE OF INFORMATION SERVICES

by

Herman M. Weisman
Office of Standard Reference Data
National Bureau of Standards
Washington, D.C. 20234

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

IR 000 350

THE IMPORTANCE OF INFORMATION ANALYSIS CENTERS IN THE PERFORMANCE OF INFORMATION SERVICES

My paper will discuss how the activities of the information analysis center can enhance the performance of information services. Many observers (4,7) have noted that one of the major goals of a scientifically and technologically oriented society is to optimize the ratio of knowledge generated to information generated. The information analysis center is a mechanism that can help accomplish such a goal. The chief product of an information analysis center is knowledge. The chief products of other types of information systems are information. Having said this, I recognize the statement might sound like double-talk, therefore, before going any further, it might be well to establish a common frame of reference.

Information is a generic term, having a number of subsets. Most dictionaries define information as knowledge, intelligence, facts, figures, news, or data which can be used, transferred, or communicated. The longest-lived, most persistent sort of information is called knowledge. Knowledge is the result of an act or state of understanding. It is the clear perception or learning gained through experience or ruminative cognition. The term, data, is often defined as raw facts. Most information originates in this context, as raw, undigested data. In science and technology, data are characterized by their tendency toward numerics or quantification. Quantified data intellectually processed become information and produce knowledge (6).

Since I have used the terms, information services, information analysis center, and information system, a few more definitions are necessary. A system is an arrangement of parts or elements working together to perform a set of operations in the accomplishment of the purpose of the whole. Services are a

system of activities and materials used to accomplish some regular work or accommodation for the user. The term, information system, refers to the methods, materials, media, producers and recipients involved in an organized way to effect information transfer within a specific field, activity, or organization. Information services is the term applied to the system of resources, personnel, activities, and materials for providing specific users with data, information, counsel, documentation, and/or documents. A library is a specific type of information syster. It is a collection of documents, organized and maintained for reference and study, usually for a designated set of users. Libraries probably are as old as the written word. The first libraries, established in the Near East about 3500 BC, were repositories of clay tablets or papyrus scrolls that recorded such information as vital statistics, recipes, boundaries of land, meteorological phenomena, and political events. The early librarians were scholars and subject specialists; the library resources and the system of operation were doubtless analogous to those of the present day information analysis center (C).

Units providing information services in organizations are frequently titled information centers or information departments. The concept of an information center has been changing. The tremendous increase in scientific research and development activities since World War II stepped up demands for expanded, more efficient, and better-integrated information services. The result has been a trend to unify library, patent, translation, report writing, archival, abstracting, literature research, editorial, communications, and publications activities within a single facility. The centralization of all, some, or only two or three of these activities has at times received the appellation of information center. Some information centers offer additional services such as replies to queries, retrospective searches, selective dissemination of information, and other types of services.

In practise, other terms are used, depending upon the variations within the services, as for example, documentation center, clearinghouse, referral center, and special library. To help clarify this very confusing situation, I have organized Table 1 to compare the functions, services and products of these various types of organizational units. This table is an expansion and revision of the tables constructed by Painter (3). Before we examine Table 1, let me complete my definitions. The term, information analysis center, is very recent, but the concept is as old as human culture. The COSATI Panel on Information Analysis Centers has defined it as:

> ...a formally structured organizational unit specifically (but not necessarily exclusively) established for the purpose of acquiring, selecting, storing, retrieving, evaluating, analyzing, and synthesizing a body of information and/or data in a clearly defined specialized field or pertaining to a specific mission with the intent of compiling, digesting, repackaging, or otherwise organizing and presenting pertinent information and/or data in a form most authoritative, timely, and useful to a society of peers and management (2).

Further, the Panel developed the following criteria for characterizing and identifying the information analysis centers:

> The key activities are the analysis, interpretation, synthesis, evaluation, and repackaging of information for the purpose of enabling users better to assimilate the information or numerical data of a specific field.
>
> An information analysis center uses subject specialists to perform the analysis, evaluation, or synthesis.

> An information analysis center produces [knowledge in the form of] new, evaluated information in the form of critical reviews, state-of-the-art monographs, or data compilations and usually provides substantive evaluated responses to queries.
>
> An information analysis center provides assistance to a community of users and not just assistance to "in-house" personnel (2).

Let us now examine Table 1. At one end is the special library and at the other is the information analysis center. That there is a continuum in function is not necessarily implied. However, the word, analysis, identifies the critical characteristic distinguishing this type of center from the other systems. The juxtaposition of items in the table is meant to reveal similarities and dissimilarities as well as to show the great overlap of functions, services, and products of a number of these systems.

Information analysis centers are costly because the generation of their products and services are based mainly upon intellectual activity--the type of analysis which results in the creation of new knowledge. These functions and services are performed by high level professional personnel, experts in subject fields. Alvin Weinberg in his report enunciated that the information analysis center was:

> ...primarily a technical institute rather than a library. It must be led by professional working scientists and engineers who maintain the closest contact with their profession and who, by being near the data, can make new syntheses that are denied those who do not have all the data at their fingertips. (5)

Information analysis centers are located in active research environments. The operators and analysts usually are respected researchers in their field of specialties.

Among the more important services an information system can offer is response to specific questions. The information analysis center, almost exclusively, can provide on call competent answers to specific questions. Some information services centers may be in a position to retrieve textual statements from one or several documents relevant to an inquiry. Relevance, however, is not always synonymous with competence.

In the best of all possible worlds, the worth of information services centers are recognized and they receive all the financial support they require. In the actual crush of reality, information activities too often are considered luxury items. In affluent times, they receive the support they deserve, but in depressed times, as we are in at present, they receive the first and severest cuts. This unfortunate experience is the occupational hazard of all support-type activities. Service activities, the underlying philosophy goes, can be justified only through their contributions to improving the efficiency of primary activities. This accounts for the viewpoint that is persuasive and for the practice that is prevalent that primary activities such as research or engineering—often in the position to benefit the most—pay for that benefit. But alas, when hard times descend, hardest to be hit by any retrenchment is the support service contributing only indirectly to the primary activities. Such are the hard facts of life, not only in the information endeavor but in all human enterprise. In today's difficult times, even research, development and engineering are feeling the budget crunch.

How are information activities faring today? All of us know the answer: They are faring badly. Despite the fact that a number of information analysis centers have lost or are losing governmental financial support they have enjoyed for years, I believe that the information analysis center, after the dust has settled in the

context of today's belt-tightening, will be recognized and its importance will become more significant especially in periods of decreasing government support of research and development. The reason is the information analysis center has demonstrated by its products and services its capability to enhance technological progress. Urgent social, economic, political and technological problems in such areas as energy, conservation, pollution control, urban and regional development, health, human resources development, drugs, and control of natural catastrophes like floods and earthquakes will call for more efficient utilization of information and knowledge. The information analysis center because of its capability to distill reliable knowledge from the stuff of information can play a critical role to make better use of information already generated.

The information analysis center should be receiving increased attention in the private sector. Most industrial concerns already have recognized that information is a major resource requiring capable management. Many companies have inaugurated information services activities to help promote their operations and some have developed information analysis center activities to improve their competitiveness. Industrial associations like the Copper Development Association and the American Petroleum Institute also are supporting or developing information analysis centers to help member firms solve problems and upgrade their capabilities.

Branscomb (1) has made the observation that perhaps the most important event of the next decade will be the recognition of the true value of information—the right information, reliable and relevant to our needs, available in useful form to all those that need it. Branscomb believes that the most useful contribution of the information analysis center may well be to demonstrate the importance and practicality of achieving objectivity and credibility in utilization of organized information. Information and knowledge are the keys to the wise management of our future, and the information analysis center has a distinct role to play in optimizing the ratio of knowledge generated to information generated.

REFERENCES

(1) Branscomb, Lewis B., "Information Analysis Centers: The Challenge of Being Needed," in The Management of Information Analysis Centers Proceedings of a Forum sponsored by the COSATI Panel on Information Analysis Centers, COSATI, Federal Council for Science and Technology, January 1972.

(2) Directory of Federally Supported Information Analysis Centers January 1970. Sponsored by Panel 6, Information Analysis Centers, Committee on Scientific and Technical Information, Federal Council for Science and Technology, 1970.

(3) Painter, Ann F., The Role of the Librarian in Relation to Other Information Activities, A State of the Art Review, Graduate Library School, Indiana University, Bloomington, Indiana, August 1968.

(4) Passman, Sidney, Scientific and Technological Communication, London: Pergamon Press, 1969.

(5) Science, Government, and Information, The Responsibilities of the Technical Community and the Government in the Transfer of Information, A Report of the President's Science Advisory Committee, Washington, D.C.: U.S. Government Printing Office, January 10, 1963.

(6) Weisman, Herman M., Information Systems, Services, and Centers, New York: Wiley-Becker and Hayes, Inc., 1972.

(7) Whittenburg, John A. and Anne W. Schumacher. Guidelines for Planning a Task-Oriented Information System, Whittenburg, Vaughan Associates, Inc. Alexandria, Virginia, March 1969.

TABLE I. Comparison of Functions, Products and Service Operations among Types of Information Services Organizations (M = Major Activity, m = Minor Activity, r = Rare Activity, 0 = No Activity)

		Special Library	Documentation Center	Referral Center	Clearinghouse	Information Services/Center	Information Analysis Center
Functions	Collection						
	Document	M	M	0	M	M	m
	Data/Information	0	0	0	r	M	M
	Processing						
	Document	M	M	0	M	M	m
	Data/Information	r	0	0	r	M	M
	Storage						
	Document	M	M	0	M	M	m
	Data/Information	0	0	0	r	M	M
	Retrieval						
	Document	M	M	0	M	M	m
	Data/Information	0	0	0	r	M	M
	Dissemination						
	Document	M	M	0	M	M	0
	Data/Information		0	0	0	M	M
	Publication or Reproduction						
	Document	0	M	0	M	M	M
	Data/Information	0	0	0	0	M	M
	Information Generation						
	Document	0	0	0	0	m	M
	Data/Information	0	0	0	0	m	M
	Archive	M	m	0	0	r	0
Services	Consultation and Advice	r	0	r	r	m	M
	Replies to Inquiries	m	r	r	r	M	M
	Referral	r	r	M	M	m	r
	Retrospective Search	M	M	0	M	M	r
	SDI	m	m	0	m	m	r
	Serves Visitors	M	0	0	r	m	r
	Conducts Seminars and Conferences	0	0	0	0	m	r
	Conducts Research	0	0	0	0	0	m
	Translation Services	m	0	0	r	m	r
Products	State of Art Reports	0	0	0	0	m	M
	Critical Reviews	0	0	0	0	0	M
	Critical Compilations	0	0	0	0	0	M
	Handbooks	0	0	0	0	m	M
	Bibliographies	M	M	r	M	M	m
	Data Sheets	0	0	0	0	m	M
	Current Awareness Bulletins	M	r	0	M	M	m
	Periodicals	m	0	0	0	m	r
	Abstracts	r	r	0	r	m	m
	Indexes	m	r	0	r	m	r
	Newsletters	m	m	m	m	m	m
	Film	0	0	0	0	m	r
	Directories	m	0	M	m	m	r
	Translations	r	0	0	r	m	r
	Thesauri	m	r	0	m	m	m
	Recommendations	0	0	0	0	m	m
	Correlations	0	0	0	0	0	M
	Accession Lists	M	M	0	m	m	r
	Conference Proceedings	0	0	0	0	m	r